

ABSTRACT

Thermoplastic polymer foams having sound deadening properties satisfactory for demanding applications are provided which have mechanical strength, which are economical to manufacture, and which are hydrolytically stable. Methods of preparing these foams are also provided. The foams are useful in sound management, cushion packaging, filtering, and fluid absorption and exhibit one or more of the following properties: 1) average cell size greater than about 2 mm; 2) substantially open-cell structure and 3) relatively large pores connecting the cells. In order that the foam be acoustically active, the foam should possess a substantially open-cell structure and a relatively low airflow resistivity. Foams with substantially open-cell structure and relatively low airflow resistivity are prepared by mechanically opening a foam having an average cell size greater than about 2 mm. In most cases, such mechanical opening creates relatively large pores connecting the cells.